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atg Met 1	agt Ser	aat Asn	aaa Lys	aac Asn 5	gtc Val	aat Asn	gta Val	agg Arg	aaa Lys 10	tcg Ser	cag Gln	gaa Glu	ata Ile	aca Thr 15	ttc Phe	48
tgc Cys	ttg Leu	ctg Leu	gca Ala 20	ggt Gly	atc Ile	ctg Leu	atg Met	ttc Phe 25	atg Met	gca Ala	atg Met	atg Met	gtt Val 30	gcc Ala	gga Gly	96
cgc Arg	gct Ala	gaa G1u 35	gcg Ala	gga Gly	gtg Val	gcc Ala	tta Leu 40	ggt Gly	gcg Ala	act Thr	cgc Arg	gta Val 45	att Ile	tat Tyr	ccg Pro	144
gca Ala	ggg G1 y 50	caa G1n	aaa Lys	caa Gln	gtg Val	caa G1n 55	ctt Leu	gcc Ala	gtg Val	aca Thr	aat Asn 60	aat Asn	gat Asp	gaa Glu	aat Asn	192
agt Ser 65	acc Thr	tat Tyr	tta Leu	att Ile	caa G1n 70	tca Ser	tgg Trp	gtg Val	gaa Glu	aat Asn 75	gcc Ala	gat Asp	ggt Gly	gta Val	aag Lys 80	240
gat Asp	ggt Gly	cgt Arg	ttt Phe	atc Ile 85	gtg Val	acg Thr	cct Pro	cct Pro	ctg Leu 90	ttt Phe	gcg Ala	atg Met	aag Lys	gga G1y 95	aaa Lys	288
aaa Lys	gag Glu	aat Asn	acc Thr 100	tta Leu	cgt Arg	att Ile	ctt Leu	gat Asp 105	gca Ala	aca Thr	aat Asn	aac Asn	caa Gln 110	ttg Leu	cca Pro	336
cag Glr	gac Asp	cgg Arg 115	Glu	agt Ser	tta Leu	ttc Phe	tgg Trp 120	atg Met	aac Asn	gtt Val	aaa Lys	gcg Ala 125	att Ile	ccg Pro	tca Ser	384
	gat Asp 130	Lys	Ser		Leu		Glu					Leu				432
ago Ser 145		att Ile	aaa Lys	ctg Leu	tac Tyr 150	Tyr	cgc <b>A</b> rg	ccg Pro	gct Ala	aaa Lys 155	Leu	gcg Ala	ttg Leu	cca Pro	ccc Pro 160	480
gat Asr	cag Gln	gcc Ala	gca Ala	gaa Glu 165	Lys	tta Leu	aga Arg	ttt Phe	cgt Arg 170	Arg	ago Ser	gcg Ala	aat Asn	tct Ser 175	ctg Leu	528
aco Thi	ctg Leu	att Ile	aac Asn 180	Pro	aca Thr	ccc Pro	tat Tyr	tac Tyr 185	Leu	acg Thr	gta Val	aca Thr	gag Glu 190	ı Leı	ı aat ı Asn	576

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_	Gly		_	_	_	_		_	Gly	_	624
									tac Tyr		672
									gta Val		720
gaa Glu	taa						,				726

FIG.1A-2

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Met 1	Ser	Asn	Lys	Asn 5	Val	Asn	Val	Arg	Lys 10	Ser	Gln	G1u	Пe	Thr 15	Phe
Cys	Leu	Leu	A1a 20	Gly	Ile	Leu	Met	Phe 25	Met	Ala	Met	Met	Val 30	Ala	Gly
Arg	Ala	G1u 35	Ala	Gly	Va1	Ala	Leu 40	Gly	Ala	Thr	Arg	Va1 45	Ile	Tyr	Pro
	50		_	Gln		55					60		•		
65		•		Ile	70		•			75		·			80
•				Ile 85					90					95	
			100	Leu	_			105					110		
	•	115		Ser			120					125			
	130	-		Lys		135	~				140				
145	_		_	Leu	150	-	_			155					160
•				Glu 165	_		_		170					175	
			180	Pro				185					190		
•		195	_	Va1			200					205			
Ser	210			Leu		215	_				220				
Thr 225 Glu	Ile	Asn	Asp	Tyr	Gly 230	Ala	Leu	Thr	Pro	Lys 235	Met	Thr	Gly	Val	Met 240

FIG.1B

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											ctg Leu -10						48
											aat Asn						96
											aac Asn					:	144
											tcg Ser						192
											tat Tyr 55					;	240
											ttt Phe					2	288
											acc Thr					;	336
											tgg Trp						384
tat Tyr	ttg Leu	acg Thr 110	cct Pro	gtg Val	agc Ser	agt Ser	gcg Ala 115	ggc Gly	ggg Gly	gtg Val	gcg Ala	att Ile 120	aaa Lys	gct Ala	ggc Gly		432
											aac Asn 135						480
											aat Asn				gtg Val 155		528
											gat Asp						576

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ccg Pro								6	24
aaa Lys								6	72
ggc G1y 205								7	20
gtc Val								<b>, 7</b>	68
acg Thr								8	16
acg Thr								8	64
caa G1n						taa		9	03

FIG.1C-2

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```
Met Lys Arg Val Ile Thr Leu Phe Ala Val Leu Leu Met Gly Trp Ser
                        - 15
Val Asn Ala Trp Ser Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile
Pro Ile Gly Gly Gly Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Val
Val Asn Val Gly Gln Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe
Cys His Asn Asp Tyr Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln
Arg Gly Ser Ala Tyr Gly Gly Val Leu Ser Asn Phe Ser Gly Thr Val
Lys Tyr Ser Gly Ser Ser Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro
Arg Val Val Tyr Asn Ser Arg Thr Asp Lys Pro Trp Pro Val Ala Leu
Tyr Leu Thr Pro Val Ser Ser Ala Gly Gly Val Ala Ile Lys Ala Gly
                            115
Ser Leu Ile Ala Val Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser
                        130
                                             135
Asp Asp Phe Gln Phe Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val
                    145
                                         150
Val Pro Thr Gly Gly Cys Asp Val Ser Ala Arg Asp Val Thr Val Thr
                                    165
Leu Pro Asp Tyr Pro Gly Ser Val Pro Ile Pro Leu Thr Val Tyr Cys
                                180
Ala Lys Ser Gln Asn Leu Gly Tyr Tyr Leu Ser Gly Thr Thr Ala Asp
Ala Gly Asn Ser Ile Phe Thr Asn Thr Ala Ser Phe Ser Pro Ala Gln
                        210
                                             215
Gly Val Gly Val Gln Leu Thr Arg Asn Gly Thr Ile Ile Pro Ala Asn
                    225
                                         230
Asn Thr Val Ser Leu Gly Ala Val Gly Thr Ser Ala Val Ser Leu Gly
                240
                                    245
Leu Thr Ala Asn Tyr Ala Arg Thr Gly Gly Gln Val Thr Ala Gly Asn
            255
                                260
Val Gln Ser Ile Ile Gly Val Thr Phe Val Tyr Gln
        270
                            275
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FIG.1D

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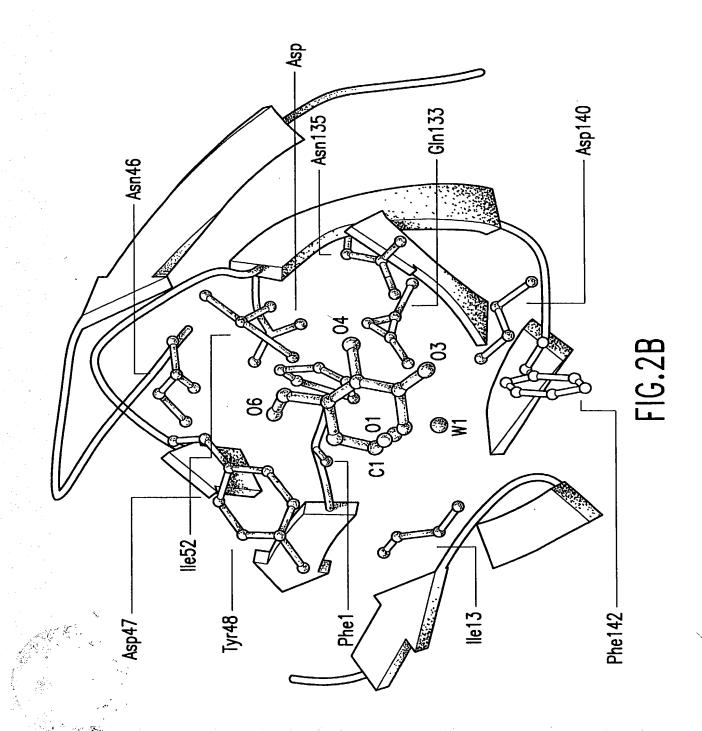
Serial No.: 10/015,085
Inventor(s). LANGERMANN et al.

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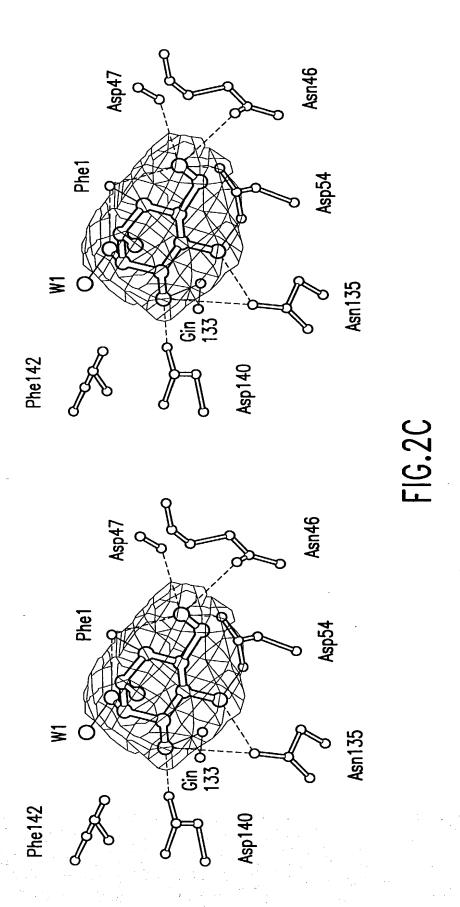


FIG.2A

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Inventor(s): LANGERMANN et al.
NT PROTEINS, HIGH POTENCY INC.

Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY ANTIBODIES, AND FIMCH CRYSTAL STRUCTURE"

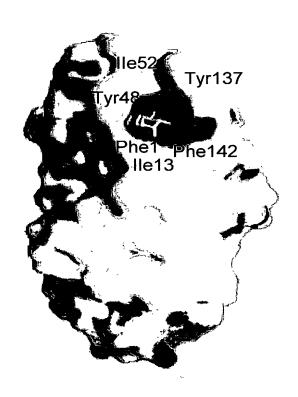
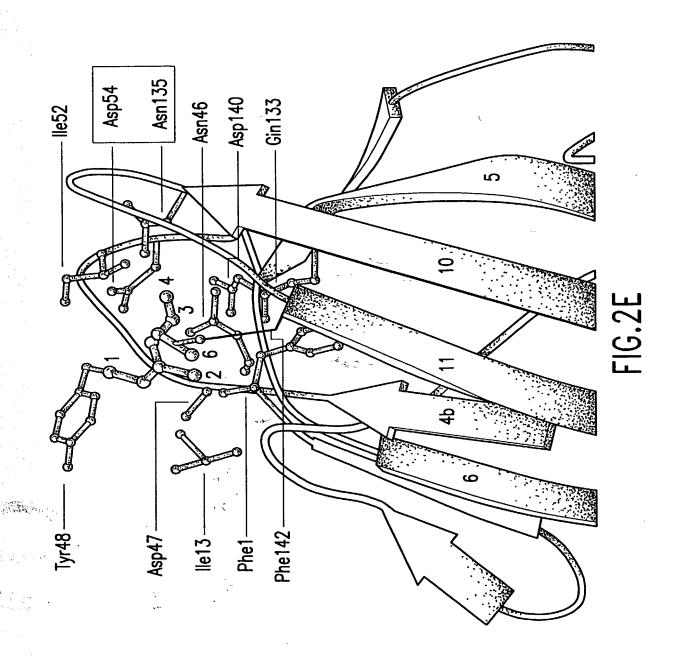


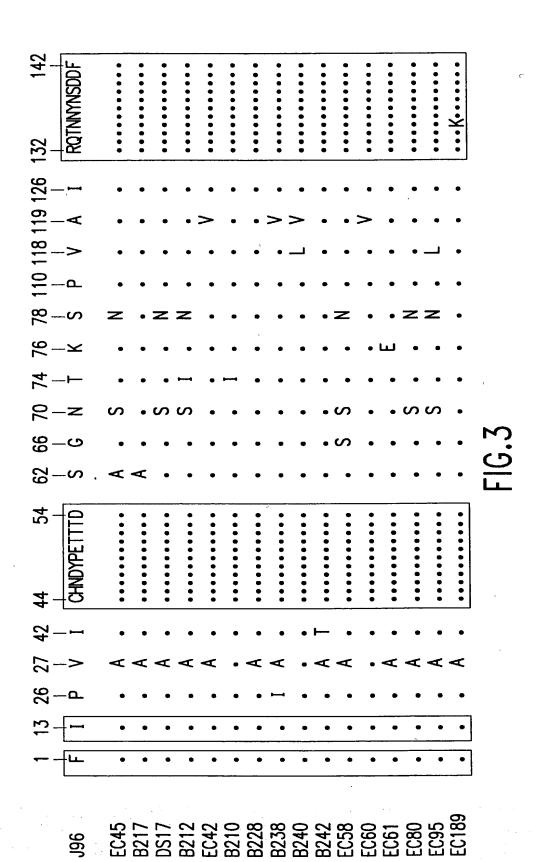
FIG.2D

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Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY
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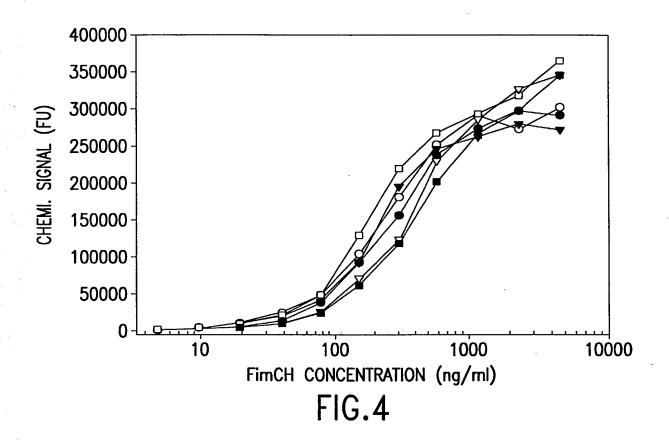


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ventor(s). LANGEPMANN Inventor(s). LANGERMANN et al. Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY ANTIBODIES, AND FIMCH CRYSTAL STRUCTURE"

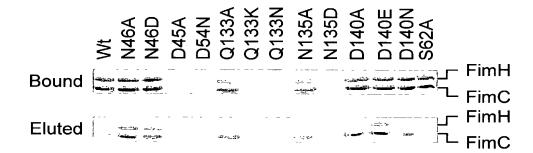
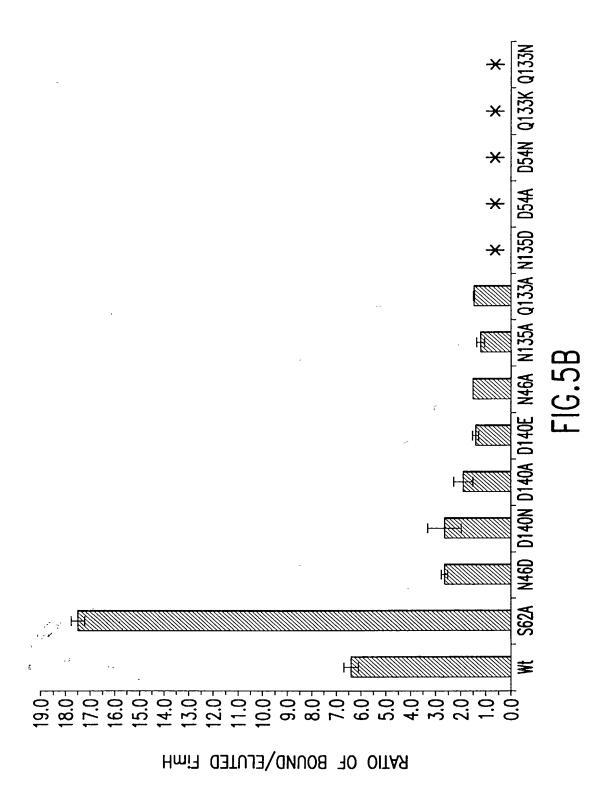
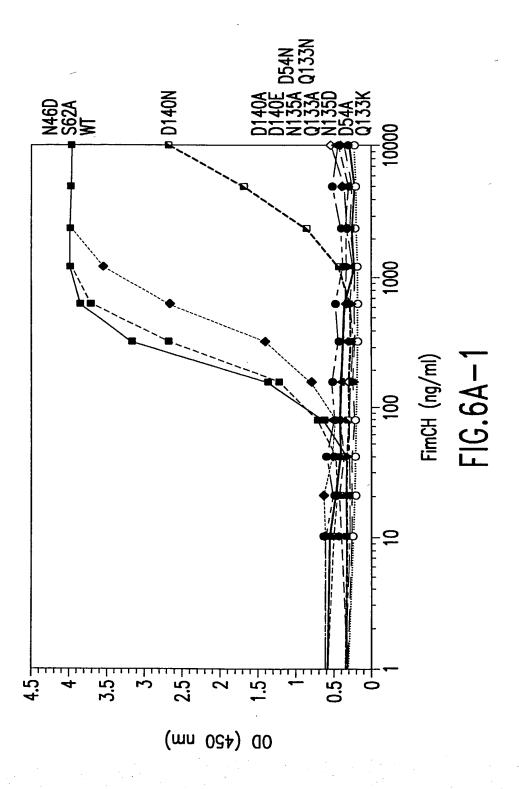


FIG.5A

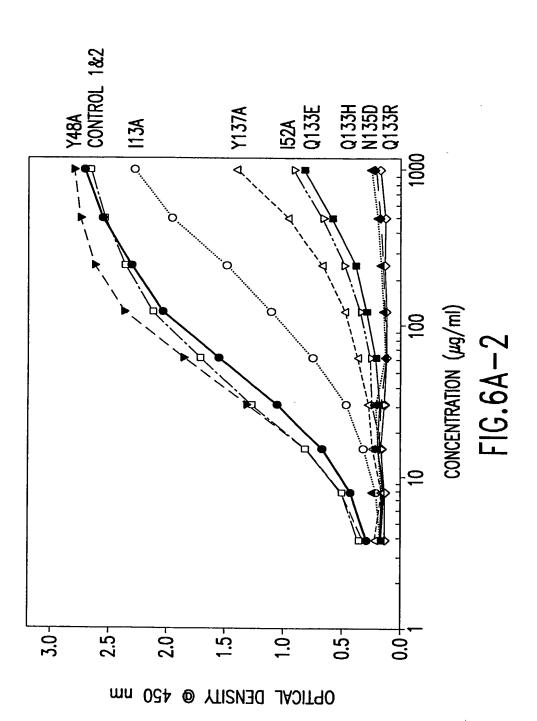
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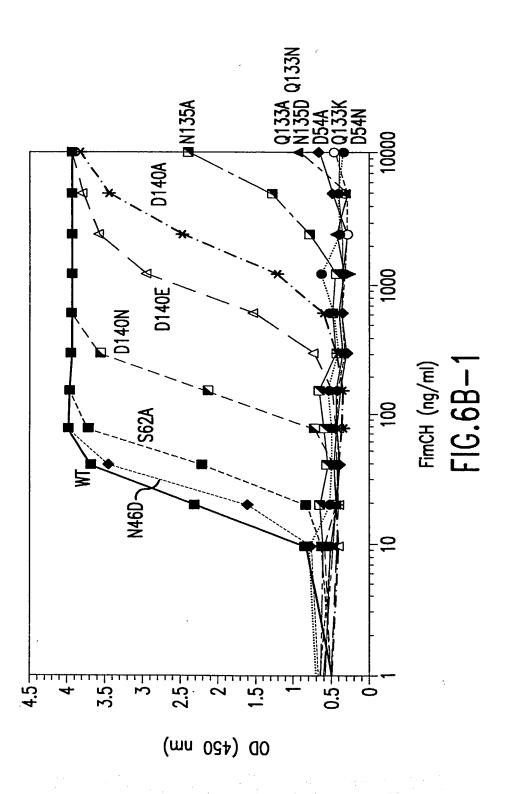
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Inventor(s): LANGERMANN et al
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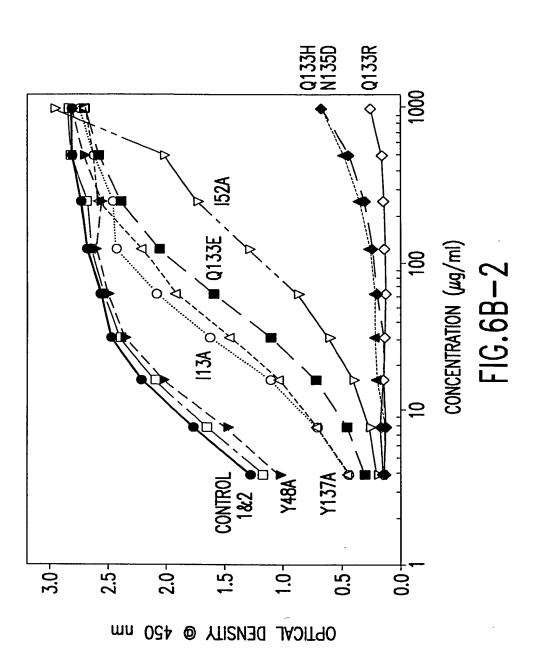
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Inventor(s): LANGERMANN et al.
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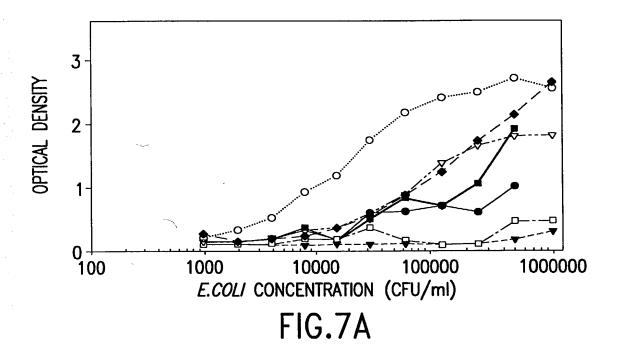
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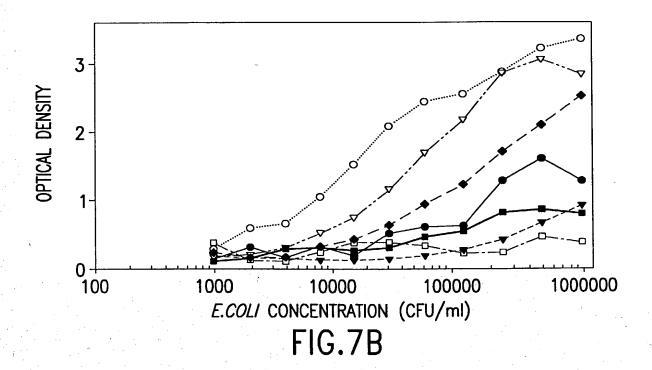


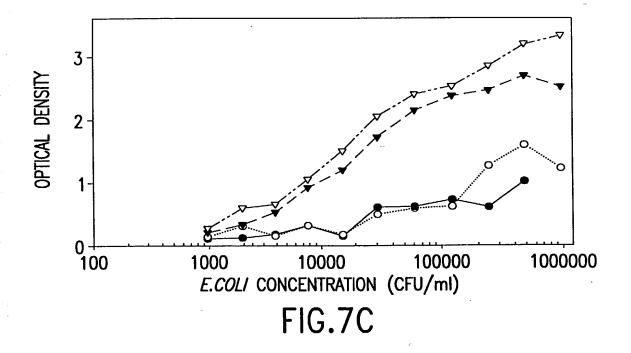
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Inventor(s): LANGERMANN et al. Title: "MUTANT PROTÉINS, HIGH POTENCY INHIBITORY ANTIBODIES, AND FINCH CRYSTAL STRUCTURE"

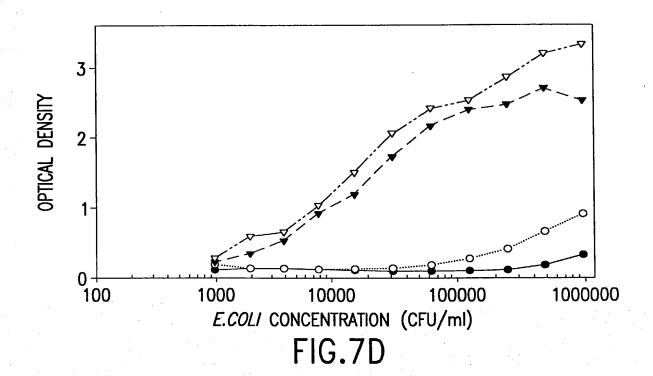


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/entor(s): LANGERMANN Inventor(s): LANGERMANN et al. Title. "MUTANT PROTEINS, HIGH POTENCY INHIBITORY ANTIBODIES, AND FIMCH CRYSTAL STRUCTURE"

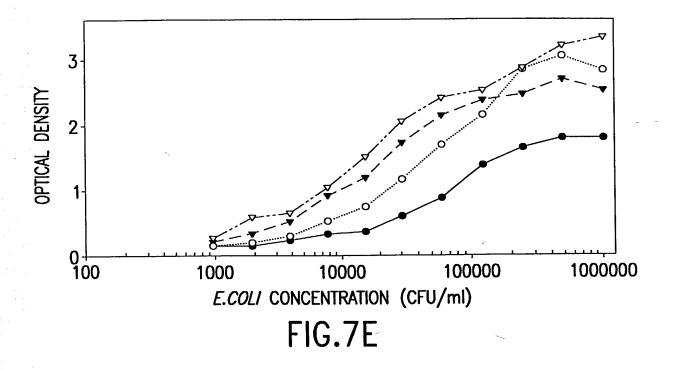


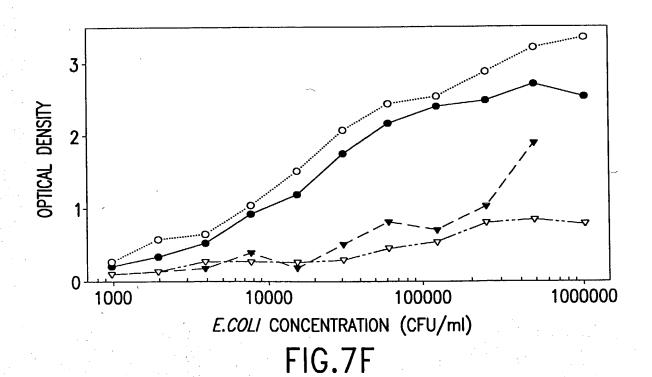




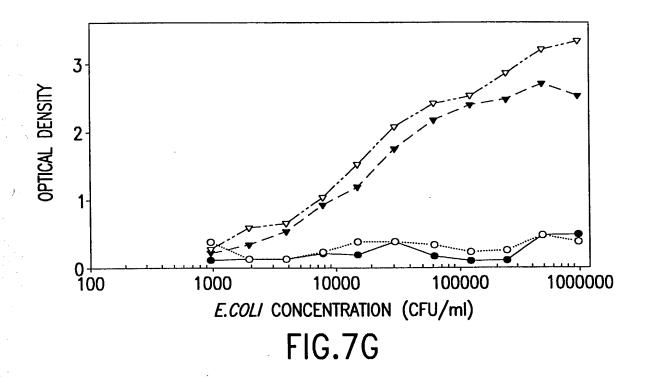


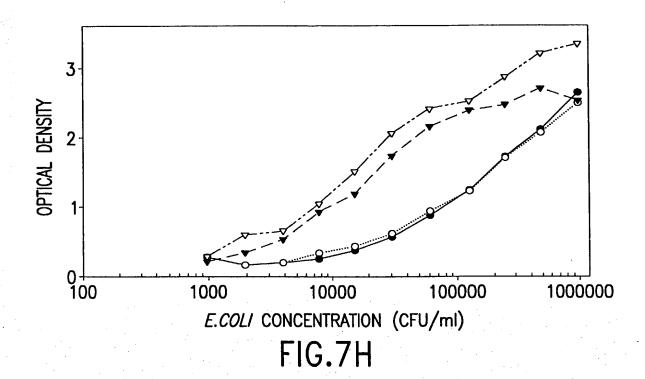
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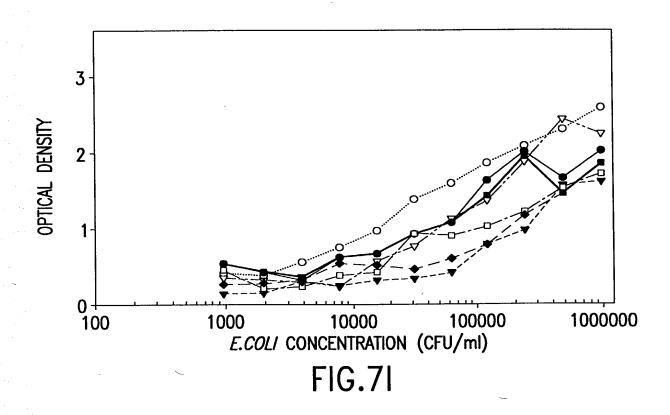




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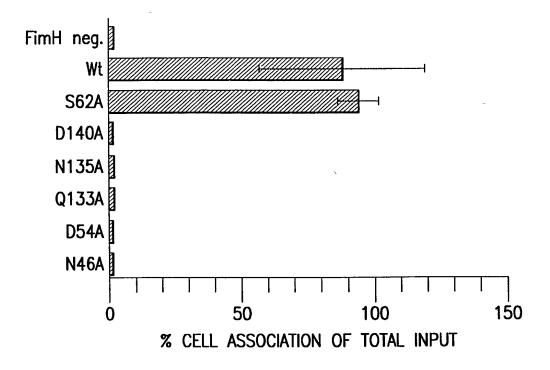


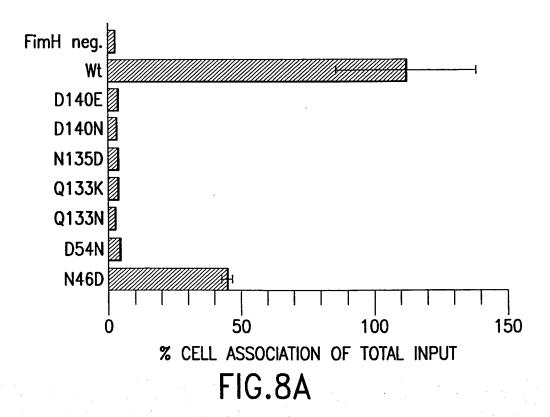
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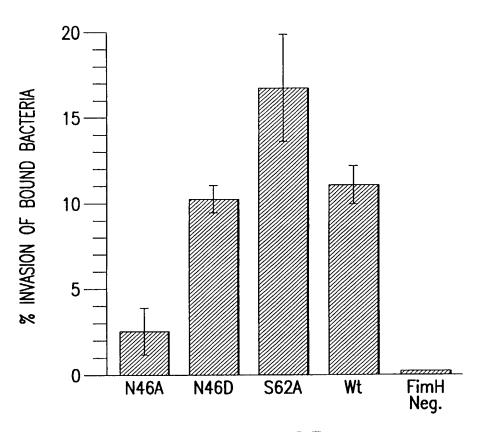


FIG.8B

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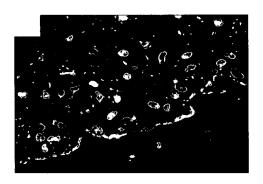


FIG.9A

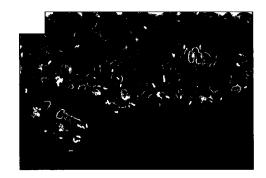


FIG.9B

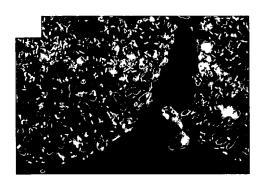


FIG.9C

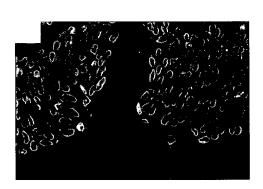


FIG.9D



FIG.9E

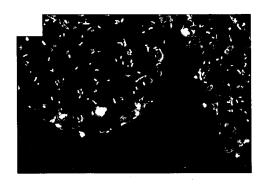


FIG.9F

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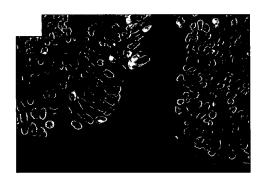


FIG.9G

FIG.9H



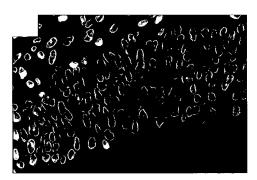


FIG.91

FIG.9J

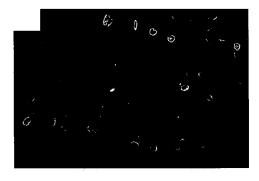


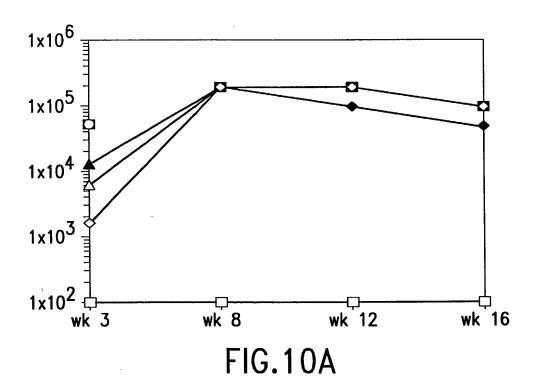
FIG.9K

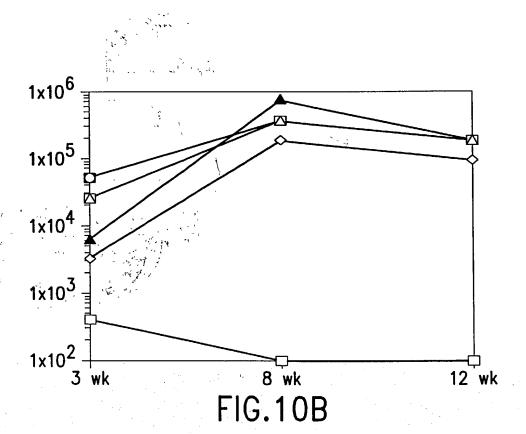
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Serial No. 10/015,085

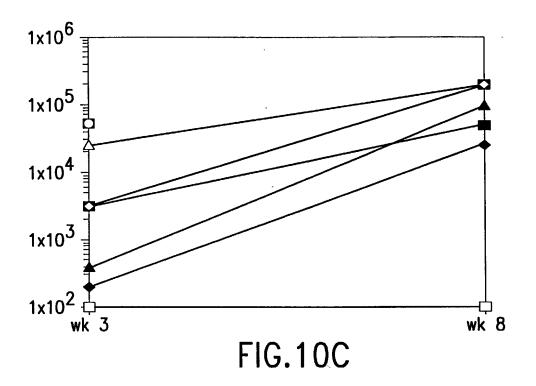
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Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"



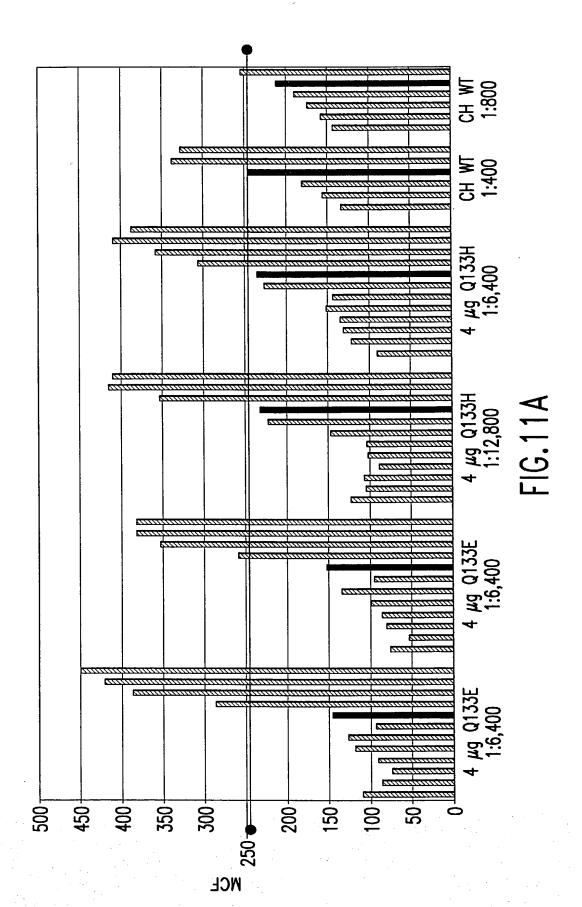


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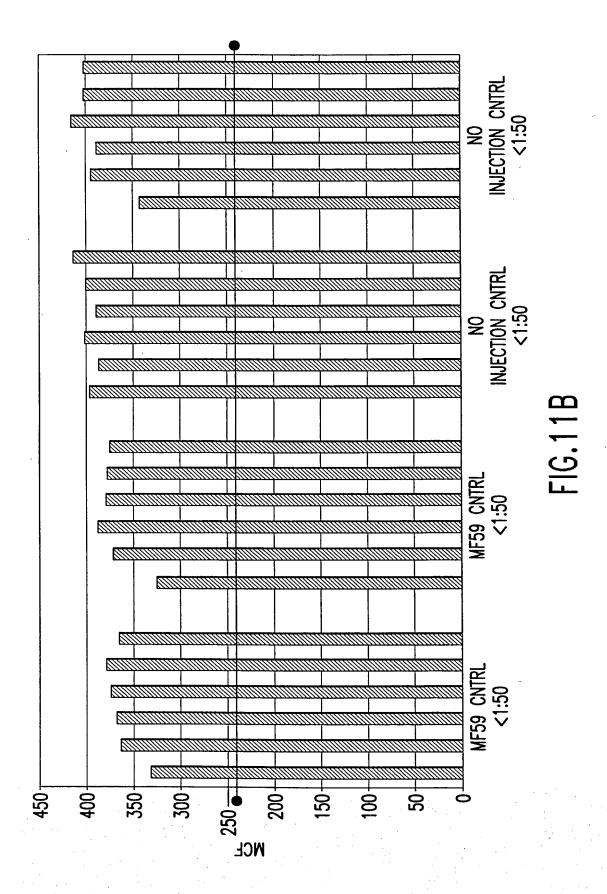
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ventor(s): LANGERMAN:: Inventor(s): LANGERMANN et al.
-Title "MUTANT PROTEINS, HIGH POTENCY INHIBITORY
ANTIBODIES, AND FIMCH CRYSTAL STRUCTURE"



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ventor(s): LANGERMANN Inventor(s): LANGERMANN et al.

Titte: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY
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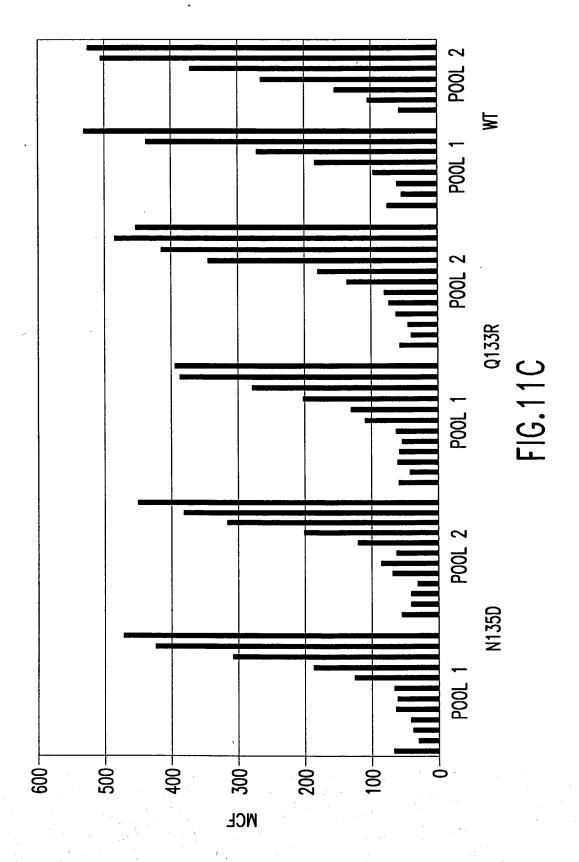
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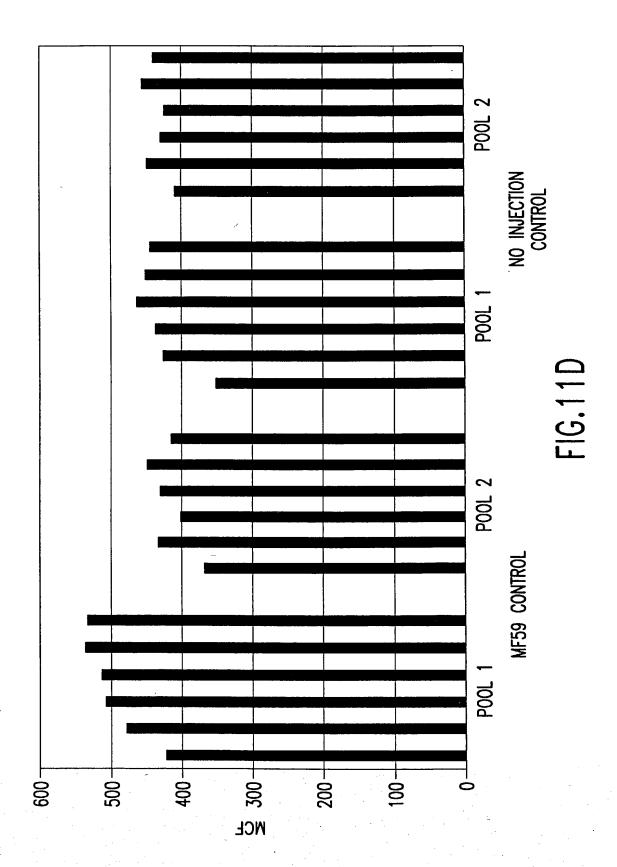
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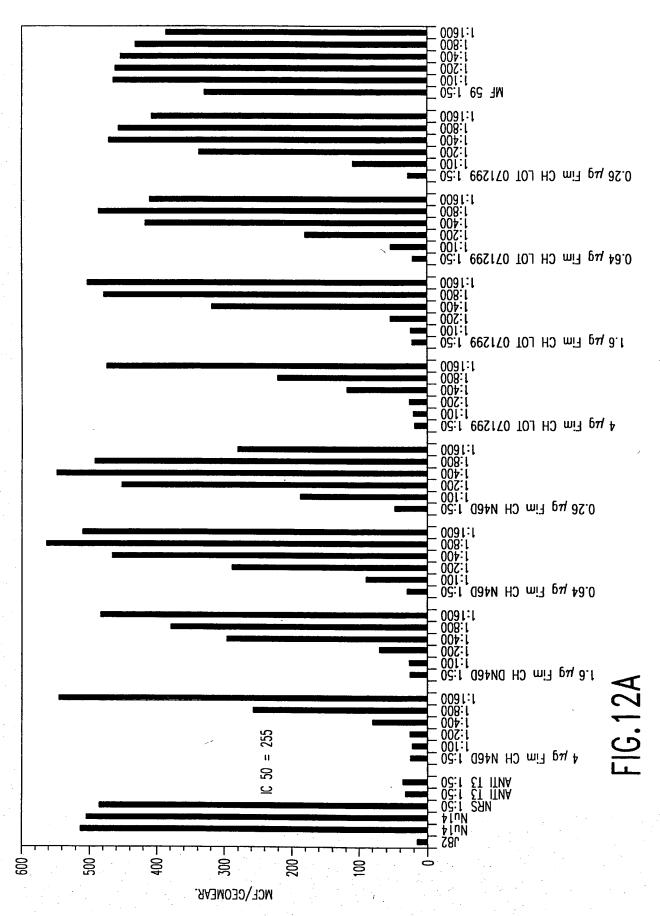
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Serial No.: 10/015,085
Inventor(s): LANGERMANN et al.
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY
ANTIBODIES, AND FIMCH CRYSTAL STRUCTURE"

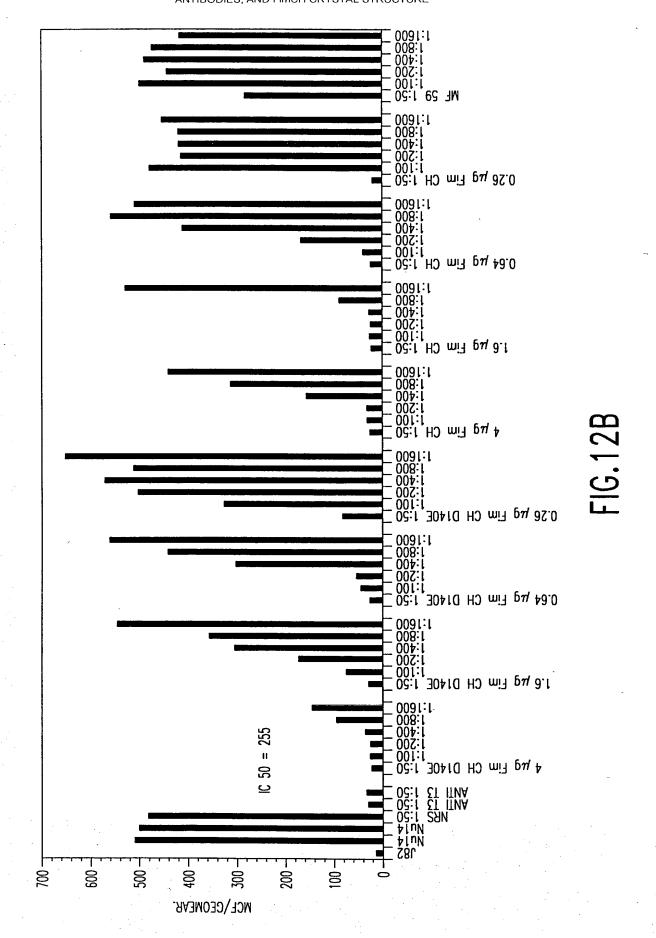


Docket No.: 10271-037-999 Serial No.: 10/015,085 Inventor(s): LANGERMANN et al. Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY ANTIBODIES, AND FINCH CRYSTAL STRUCTURE"

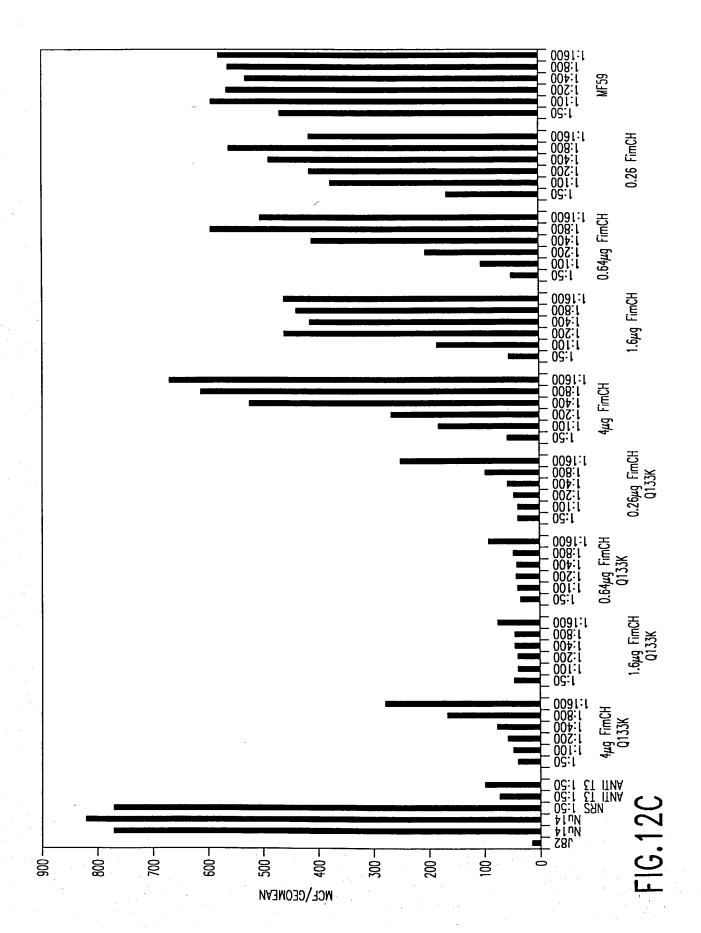


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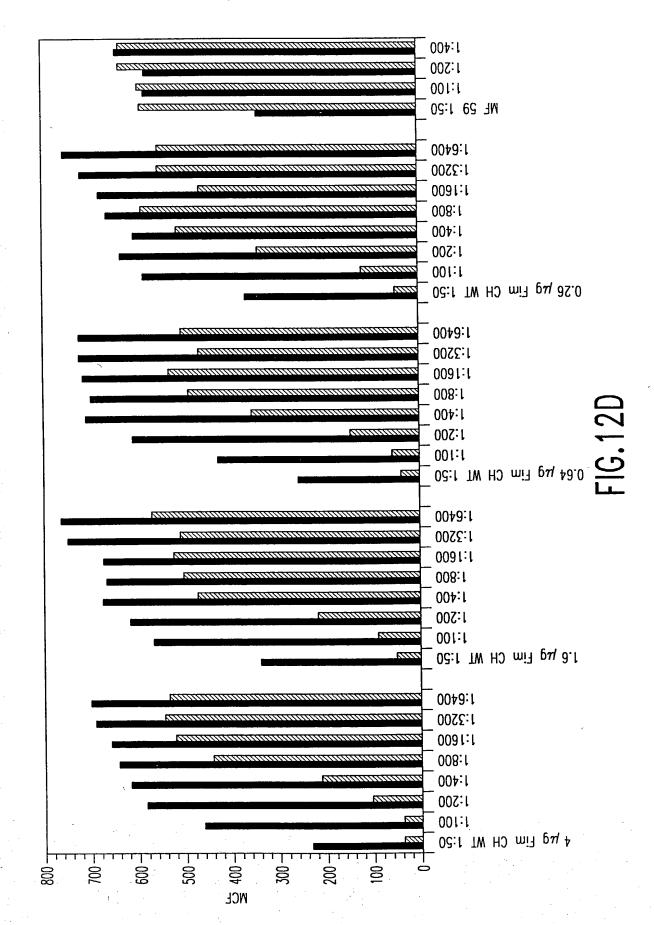


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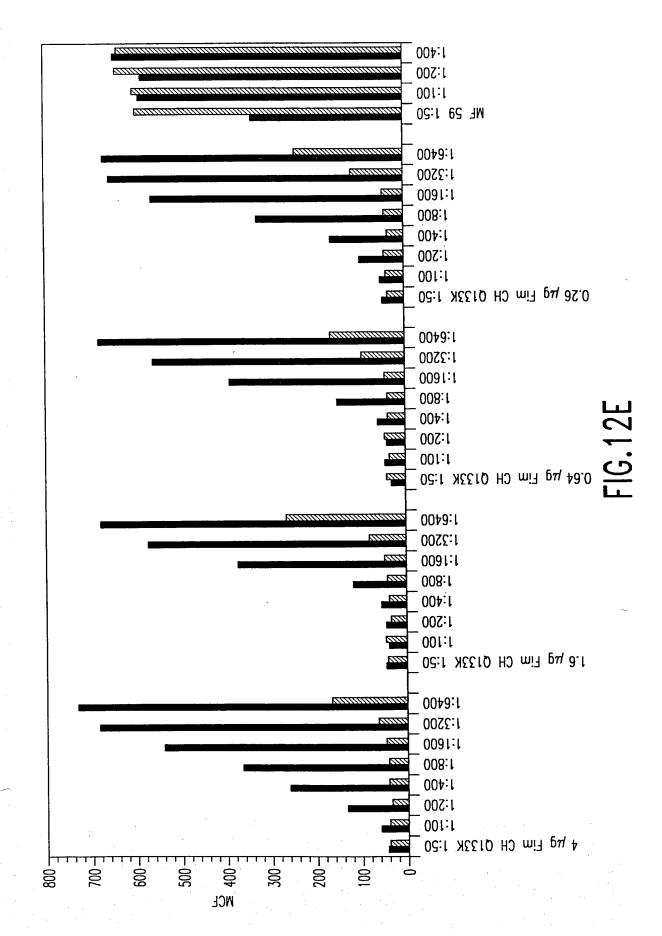


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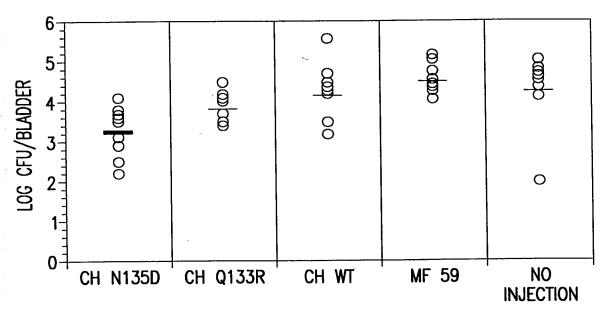


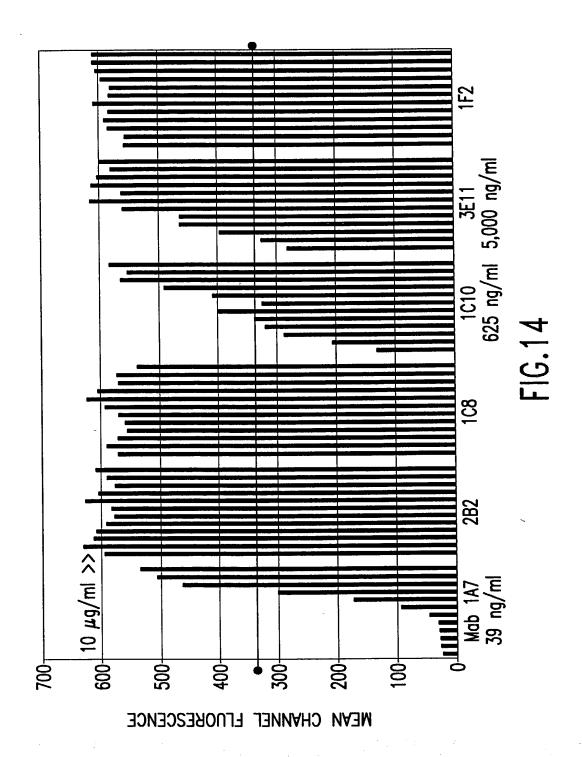
FIG.13

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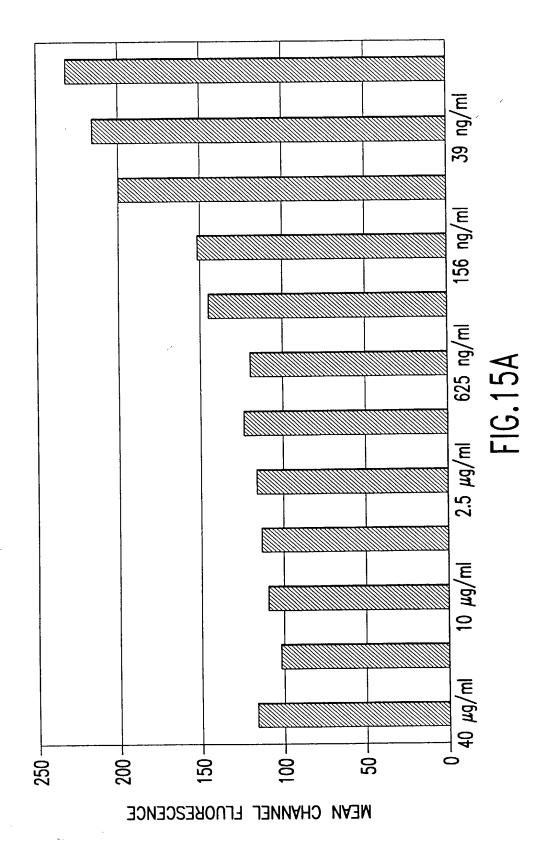


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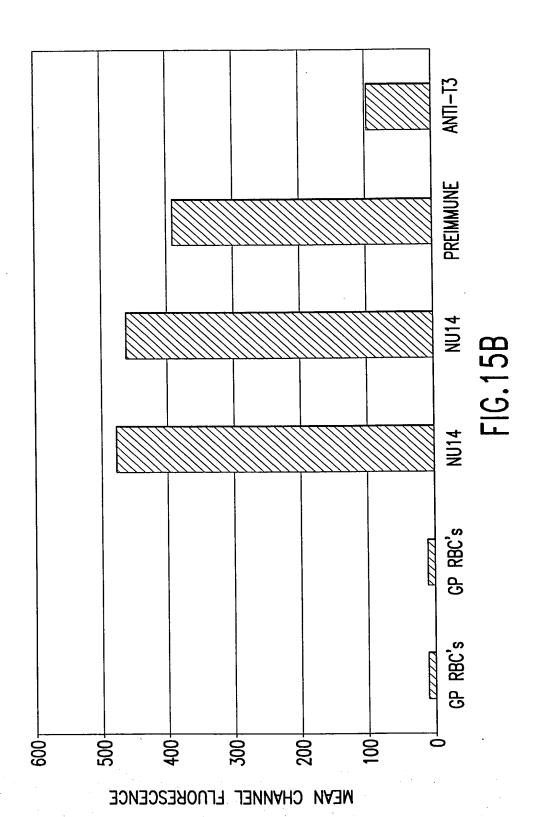


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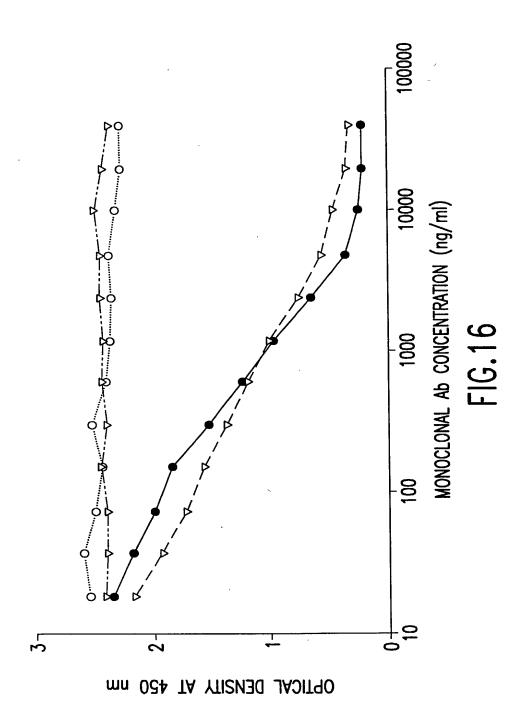
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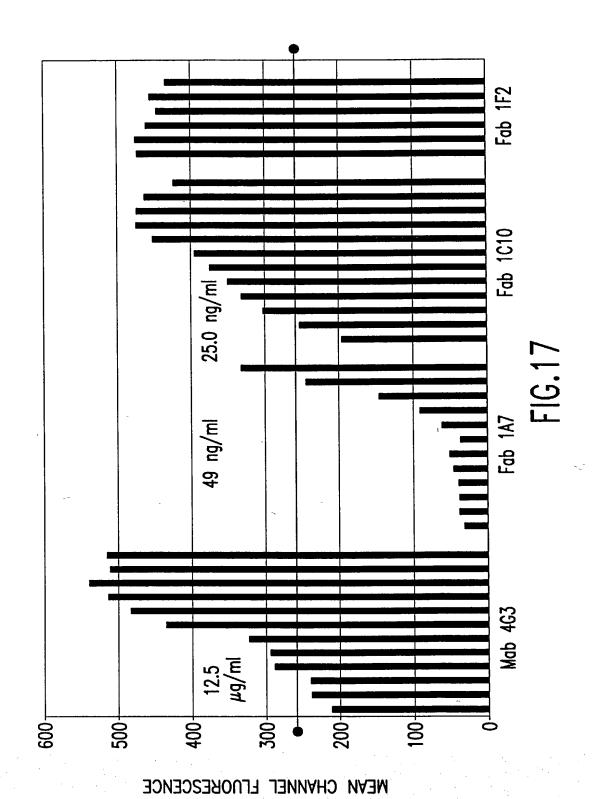
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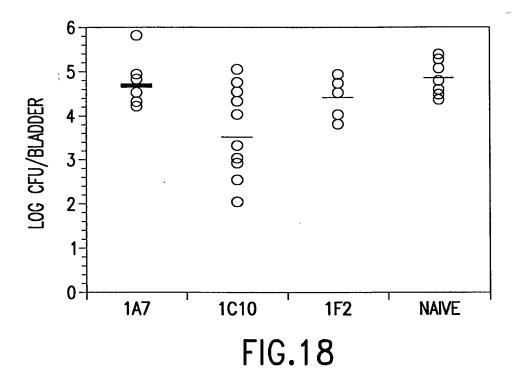


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